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## (54) ION GENERATOR

(57)Abstract:

PURPOSE: To efficiently generate ion with a simple constitution.

CONSTITUTION: An X-ray tube using the X-ray main wavelength of 15 to 2 angstrom range and having a Be window is provided, and an element to be ionized is put in the region irradiated by the X-ray through the Be window. When soft X-rays are used for ion generation energy source, the absorption loss by Be of the soft X-ray of long wavelength increases compared with absorption by N<sub>2</sub> and O<sub>2</sub>, and so the rapid increase of loss rate over ca. 20 angstrom causes disadvantage. On the other hand, short wavelength of soft X-ray below 2 angstrom causes small absorption by the atmosphere, and so it does not fit for the ionization purpose. The X-ray tube used for the ion generator requires only the target voltage of 5kV and the target current of 20μA or so and small power source capacity, is small size, resultingly easy to handle and generates no noise.

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